# BEBR

FACULTY WORKING
PAPER NO. 936



Cognitive Simplification Processes in
Acquisition and Divestment Decision-Making

*Irene M. Duhaime*
*Charles R. Schwenk*

College of Commerce and Business Administration
Bureau of Economic and Business Research
University of Illinois, Urbana-Champaign

# BEBR

FACULTY WORKING PAPER NO. 936

College of Commerce and Business Administration

University of Illinois at Urbana-Champaign

February 1983

## Cognitive Simplification Processes in Acquisition and Divestment Decision-Making

Irene M. Duhaime, Assistant Professor
Department of Business Administration

Charles R. Schwenk, Assistant Professor
Department of Business Administration

## Abstract

Acquisition and divestment decision situations are generally characterized by complexity and ambiguity. The authors hypothesize that decision-makers use certain cognitive simplification processes in such situations. Examples from recent field research and the business press indicate the plausibility of such hypotheses. Impacts on resulting decisions are discussed; future research directions are suggested.

# COGNITIVE SIMPLIFICATION PROCESSES IN ACQUISITION AND DIVESTMENT DECISION-MAKING

## Introduction

Strategic management researchers have recently begun to recognize the importance of information processing limitations for strategic decision-making (Taylor, 1975; Hogarth and Makridakis, 1981; Schwenk, forthcoming). In explaining the nature, content and timing of strategic decisions, behavioral and non-rational impacts on the decision process must be taken into account. It seems reasonable that the more complex, unstructured and strategic a decision is, the more likely it is that limitations on processing the complex information associated with it might be operating, and that less-than-rational influences might affect the decision process.

Acquisition and divestment decision-making, like other major strategic decisions, involves complexity, ambiguity and lack of structure.* Gilmour's (1973) study of the divestment decision process characterizes divestments as difficult and painful decisions for which hard analytical decision support was either unavailable or unused. Duhaime's (1981) study of influences on the divestment decision process lends further support, finding that divestment decisions result most often from a complex interaction of influencing factors, seldom from the individual influences of single factors. Similarly, decisions on whether and what a firm should acquire are generally made in the face of more information than can reasonably be considered and are further complicated by their relationship to formal and informal processes for determining organizational goals.

---

* Our discussion of cognitive simplification processes operating in acquisition or divestment decision-making focusses on whole business units or divisions of firms, decisions of whether to enter a new business or exit from an existing one. We specifically exclude from the scope of this paper the acquisition or divestment of assets alone, on the belief that such decisions tend to be much more well-structured situations to which the analytical techniques of capital budgeting can be (and are) readily applied.

It has been suggested that in order to function in such ill-structured situations, and to avoid the stress which such ambiguity produces, decision-makers may use perceptual processes or heuristics for simplifying information processing and acquisition or divestment decisions. As Tversky and Kahneman state: "In general, these heuristics are quite useful. However, in some cases they can lead to severe and systematic errors." (1974, p.1125)

In this paper, we suggest that there may be some systematic and predictable biases or simplification mechanisms in use in both acquisition and divestment decision processes. Further, we contend that four principal biases from the organizational behavior and cognitive psychology literatures can be used to describe and explain the types of decision-making errors observed in some cases of ill-considered acquisitions followed by unsuccessful turnaround attempts and eventually by divestment. We will examine and discuss these four cognitive "biases" or simplification processes in the context of major activities of acquisition and divestment decision-making. Examples of the operation of each of the biases will be given, drawn from two primary sources: published information on specific companies and recent field research involving personal interviews conducted by the first author. Examples taken from the field research will not be identified by company name in this paper because confidentiality was promised to the research participants.

## Potential Biases in Acquisition and Divestment Decisions

We frequently read of businesses divested at a loss whose managers report that the original decisions to acquire those businesses were mistaken. Their descriptions of the acquisition and divestment processes reveal that many of the biases or simplification processes identified in the cognitive psychology literature may have been operating in those decisions. In this section, we will discuss four of those biases, and the major acquisition and divestment activities* on which we contend those biases operate, using examples to support our arguments. Table 1 lists the activities and corresponding biases.

---

INSERT TABLE 1 ABOUT HERE

---

Reasoning by Analogy. Whenever acquisition is considered, management must define the type of acquisition desired and the type of portfolio problem it addresses. There is at least one cognitive process which may determine the manner in which the problem will be defined. Steinbruner (1974) identified this process in his review of decision research in cognitive psychology and called it reasoning by analogy. Reasoning by analogy involves the application of simple analogies and images to guide problem definition. Images and analogies are very common in discussions of top level problems in businesses and government. In international relations, the image of falling dominoes helped shape American policy toward Southeast Asia (Steinbruner, 1974, p.116). Business organizations and their problems are often defined using analogies to sports teams and well (or poorly) oiled machines. In strategic decision-making, it typically involves the application of analogies from simpler situations to complex strategic problems. This process helps to reduce the uncertainty perceived in the environment.

In acquisition decisions, which involve a great deal of uncertainty and complexity, the use of simple analogies may mislead the decision-makers into an overly simplistic view of the situation (Steinbruner, 1974, p.115). In the early 1970's, the management of General Cinema was considering entering (through acquisition) another line of business in addition to their theater and soft-drink bottling operations. The acquisition candidate was seen by management in terms

---

* A number of models of the acquisition and divestment decision processes have been developed, including those proposed by Gilmour (1973), Boddewyn and Torneden (1976), Nees (1978), and Bing (1980). It is not within the scope of this paper to reconcile these differing models; however, certain major activities of acquisition and divestment decision-making are common to the various models. We will therefore discuss the biases operating on those major activities.

of the analogy of "the third leg of a stool" supporting the company's high rates of return. This image or analogy suggested to company management that they enter a line of business not closely related to General Cinema's current businesses and influenced the type of acquisition candidates considered. They eventually entered an agreement with a furniture retailer to finance the development of a national chain of showrooms. This venture later appeared more and more questionable as the retailer suffered increasing losses in the mid-1970's, and was finally abandoned (Uyterhoeven, 1976).

Illusion of Control. A process demonstrated by Langer (1975), called the illusion of control, may account for managers' failure to thoroughly evaluate acquisition candidates. Under the effects of this process, decision-makers may overestimate the extent to which the outcomes of an acquisition are under their personal control and may assume that they can make the business succeed should problems arise. Langer conducted six studies which showed that subjects making a variety of decisions expressed an expectancy of personal success inappropriately higher than the objective probability would warrant. They tended to overestimate the impact of their skills on the outcome or to overestimate their skills.

Chock Full o'Nuts Corp. admits that their acquisition of Rheingold Breweries in 1974 was a serious mistake (Business Week, 11/7/77, pp.81-84). By their own assessment, Chock's management "didn't know anything about the beer business" (p.81), yet decided to acquire Rheingold, long a money loser. In managing that acquisition, they then refused to delegate decision authority to the beer division's managers. It appears that the illusion of control was operating both on the decision to acquire and on subsequent management of Rheingold, which was eventually divested.

The illusion of control tendency appears to be stronger in individuals who have experienced prior successes; it may therefore be especially strong in upper-level managers involved in strategy formulation and acquisition/divestment decisions. Having risen to the top in their organizations, they would tend to view themselves as successful decision-makers. This bias may also affect executives' evaluation of a unit's performance after acquisition, causing them to attribute unfavorable gaps between expectations and performance to chance rather than to the weakness of the unit. Attributing performance gaps to chance helps preserve their belief in the quality of their decisions.

Spun off by Proctor & Gamble Co. in an anti-trust settlement, Clorox Co.'s management made a string of acquisitions in an effort to diversify Clorox from its single mature product line. Many of those acquisitions were far afield from the firm's strengths and have since been divested. The P&G-trained managers running Clorox may have experienced the illusion of control because of their past decision-making successes or because their management experience was in situations where there was more control (strong staff support at P&G in marketing, research, etc.) (Business Week, 3/3/80, pp.42-43). Illusion of control also appears to have been operating when Ralston Purina acquired Green Thumb Co. without a thorough analysis, then failed to turn the losing operation around. A former company executive was quoted: "We did so well for so long, we got reckless." (Business Week, 9/10/79, p.112)

Some managers interviewed by the first author described acquisitions of business units at the next "downstream" stage from the firms' basic or historical businesses, which were later divested when management realized that the firm did not have the requisite managerial skills to compete in the new industry stage. Illusion of control may have been operating to prevent that realization at the time of acquisition (1981, p.156). Similarly, managers described acquisitions (later divested) whose market, customer or technical relationships to the firms' existing businesses led those firms to mistakenly believe they would be successful acquisitions; as one manager later said, "We saw 'shared customers' when we acquired it, but failed to see that it required a completely different distribution system." (1981, p.170)

Escalating Commitment. After going through the often lengthy and difficult process of evaluating acquisition candidates, executives may be strongly committed to a unit they finally acquire. This commitment may persist despite subsequent evidence of unit performance well below expectation.

Staw and his colleagues, in laboratory studies using simulated investment tasks, demonstrated escalating commitment to a chosen alternative despite negative feedback. They found that once individuals commit a significant amount of money to an investment project, they will tend to allocate more funds to the project if they receive feedback indicating that the project is failing than if they receive feedback indicating that the project is succeeding. The feeling of personal responsibility for the project apparently induces decision-makers to remain with their chosen project despite evidence that it is not paying off. An excellent review of these studies is found in Staw (1981). In these studies, it is obvious that the decision-makers perceive the discrepancy indicating a project's failure (since they allocate more money to projects which appear to be failing), but do not use this perceived discrepancy to alert them to the need to change their strategy. Rather, they seemed to interpret negative feedback as a signal to commit more funds to save the project. Other research indicates that decision-makers may explain a perceived discrepancy between unit performance and expectation as a result of chance factors rather than as a result of a flaw in initial strategy. If they adopt this interpretation, they are likely to persist in the current course of action and escalate commitment to it.

Escalating commitment may be indicated by Harris Corp.'s sustaining severe losses in the printing press business, their historical line, before eventually deciding to divest it (with a large writeoff) in the mid-1970's (Business Week, 10/10/77, pp.120-124). Similarly, Gulf & Western's recent divestments of a number of losing businesses acquired in the 1960's have been criticized for their belatedness, suggesting that escalating commitment to those businesses may have been operating. Gulf & Western's ability to avoid the cash trap of escalating commitment is complicated by two factors: first, the current management team engineered expansion by acquisition (into those businesses) in the 1960's; second, the firm's basic strategy has been to seek "undervalued assets" and turn them around with large doses of cash and/or management skill (Business Week, 10/27/80, pp.131-137). We are not suggesting that either the management team or the firm's strategy should be discarded. Rather, we are pointing out that under such conditions escalating commitment may be more likely; checks on this bias should perhaps be built into the control systems of such organizations.

The "downstream" acquisitions studied in the first author's field research and described in the previous section were generally unprofitable when divested. This suggests that escalating commitment, perhaps fueled by the difficulty of admitting lack of managerial skill, may have been operating in those situations. Our contention that escalating commitment affects the management of some acquisitions is further supported by managers' statements suggesting a relationship between corporate earnings levels and divestment of low-performance units, to the effect that some businesses had long been "money-losers," but it took a downturn in corporate earnings to trigger their divestment decisions (1981, p.175).

Single Outcome Calculation. After a period of escalating commitment to a failing acquisition, management may finally decide that it is time to consider divestment. Divestment of certain units may also be considered for the first time when a new CEO takes over or when a unit's chronic poor performance becomes noticeable to external constituents of the firm or to important internal parties such as other division managers.

Some evidence suggests that once divestment is considered as a way of dealing with a failing unit, it may quickly become the _only_ alternative considered. Steinbruner (1974), in his discussion of cognitive psychology research on decision-making, provided some insights into this process. He suggested that in any complex decision situation involving a number of potential alternatives, decision-makers may engage in _single outcome calculation_. Rather than attempting to specify all alternative courses of action for dealing with a failing unit as normative decision theory would suggest, decision-makers may focus on a single goal and a single alternative (divestment) for achieving it. Steinbruner argues that, contrary to normative models of organizational decision-making, uncertainty is often not resolved by probabalistic calculations of the outcomes of alternatives. Rather, favorable outcomes are inferred for preferred alternatives, while unfavorable outcomes are projected for non-preferred alternatives. Thus divestment decision-making often involves a single-valued problem and a single preferred alternative to which the decision-maker is committed from the outset of the decision process (1974, pp.122-123). Since this process allows decision-makers to deny the unpleasant value tradeoffs which are always present in a choice between alternatives, it significantly reduces the stress associated with ill-structured decision-making.

Steinbruner suggests that decision-makers sometimes deal with non-preferred alternatives through inferences of impossibility. In contrast to the suggestions from normative decision theory, Steinbruner points out that decision-makers may devote a good deal of effort to identifying the negative aspects of non-preferred alternatives and attempting to convince themselves that they cannot be implemented (1974, p.119).

Gilmour's (1973) research on the divestment decision process was based on field observation of a (necessarily) limited number of divestment decisions. He describes divestment situations in which "...hard data...was prepared in 'support' of only one option (i.e., no alternatives), and tended to have been prepared after the decision not before it (i.e., rationalization, not analysis)" (1973, p.295). Although Gilmour does not use the term "single outcome calculation," we believe that his research descriptions, based as they are on field observations, strongly support our contention that this bias may affect divestment decision-making.

Single outcome calculation can sometimes bias decision-making in the form of a focus on negative evaluation criteria to force elimination of particular alternatives or sets of alternatives. A possible example of this is provided by Household International's (then Household Finance Corp.) program of diversification into retailing, manufacturing and other areas when faced with increasing competition in its basic business, financial services, in the 1960's and 1970's (Business Week, 9/25/78, pp.124-125). So defensive was their diversification effort that opportunities to expand within financial services were virtually ignored (they were negatively evaluated as non-diversification alternatives); those lost opportunities were a source of later regret for top management when the damage sustained by the flagship business during that period of negative evaluation became apparent.

Single outcome calculation also appeared to influence some divestments studied by the first author. For example, some managers indicated that the decisions to sell certain units were essentially made when buyers approached the firm; dissatisfaction with the business over a period of years made the decision to divest nearly immediate (1981, p.172). Focus on single evaluation criterion may also have affected the decision to divest a large unit described as "a drag on corporate debt capacity" (1981, p.173).

## Conclusion

As was noted earlier, the intent of this paper is not to prove that cognitive simplification processes affect acquisition and divestment decisions but to suggest hypotheses about the ways decision-makers may simplify such decisions. The purpose of this concluding section is twofold: first, to discuss the type of research which should be done in the future to document the presence of these simplification processes and second, to suggest ways of minimizing the negative effects of the processes if they are demonstrated.

Implications for Research. Future research on this subject should attempt to identify the effects of some of these cognitive processes on acquisition and divestment decisions and thereby to increase the interface between the fields of cognitive psychology, behavioral decision theory and strategic management.

Future research of this type should take two directions. First, since many of the simplification processes have been examined exclusively in laboratory research, an attempt should be made to document their existence and effects in field settings. Researchers may be able to identify the processes in executives' detailed descriptions of their own acquisition and divestment decisions. Field observation of decisions may also provide insights into the effects of these processes; such research efforts would of course be limited by the difficulty of obtaining access to observe firms' sensitive strategic decisions.

A second approach would involve further laboratory research investigating the effects of these processes using tasks more representative of the ill-structured problems encountered in acquisition and divestment decision-making. Such concurrent laboratory and field research has been advocated as the most fruitful approach to research for several questions in strategic management (Schwenk, 1982a).

Implications for Practice. Though future research is necessary to demonstrate the existence of these biases, we have shown that they may operate to bias acquisition and divestment decisions. Therefore, it is appropriate here to discuss methods for reducing these biases or minimizing their effects.

Research supports the contention that cognitive biases are more likely to affect organizational decisions when there is a high level of consensus among group members or when a single powerful member can dictate the assumptions which will drive the formulation of the problem (Janis, 1972; Janis and Mann, 1977). The use of devil's advocates in such cases may reduce the effects of these biases by encouraging decision-makers to clearly identify and actively question their assumptions (Herbert and Estes, 1977; Schwenk, 1982b; Schwenk and Cosier, 1980).

During the evaluation of acquisition candidates, individuals or groups within the organization can be assigned to play the role of devil's advocate and expose the potential weaknesses of potential acquisition candidates. A kind of devil's advocate approach has been used for this purpose at Gould, Inc. Here, a group designated the green team presented a case for particular candidates to corporate executives while a group designated the red team presented the strongest possible case against the candidates (Quinn, 1980, pp.142-143).

During the management of an acquired unit, escalating commitment may be exposed by a devil's advocate group arguing for divestment of the unit. Finally, if corporate-level executives are considering divestment of a unit and there is a danger of single outcome calculation, they would be well advised to listen carefully to recommendations for improving unit performance from those responsible for managing the unit. They may be the most effective devil's advocates in such cases.

TABLE 1

MAJOR ACQUISITION AND DIVESTMENT ACTIVITIES

AND COGNITIVE SIMPLICATION PROCESSES OPERATING ON THEM

| ACTIVITIES | COGNITIVE BIASES |
|---|---|
| Consideration of Alternative Acquisitions | Reasoning by Analogy<br>Illusion of Control |
| Management of the Acquisition | Illusion of Control<br>Escalating Commitment |
| Consideration of Divestment; Decision | Single Outcome Calculation |

## REFERENCES

"After the beer at Chock Full o'Nuts," Business Week, November 7, 1977, pp.81-84.

Bing, Gordon. Corporate Acquisition. Houston: Gulf Publishing Company, 1980.

Boddewyn, J.J. and Roger L. Torneden. "The Divestment Decision Process: Some Preliminary Conclusions," unpublished manuscript, 1976.

"Clorox: Picking up the pieces of a diversification that failed," Business Week, March 3, 1980, pp.42-43.

Duhaime, Irene M. "Influences on the Divestment Decisions of Large Diversified Firms," unpublished doctoral dissertation, University of Pittsburgh, 1981.

Gilmour, S. Clark. "The Divestment Decision Process," unpublished doctoral dissertation, Harvard Business School, 1973.

"Gulf & Western: An acquisitor tries managing assets to boost return," Business Week, October 27, 1980, pp.131-137.

Herbert, T.T. and R.W. Estes. "Improving executive decisions by formalizing dissent: The corporate devil's advocate." Academy of Management Review 2 (1977):662-667.

Hogarth, R.M. and S. Makridakis. "Forecasting and planning: An evaluation." Management Science 27 (1981):115-138.

"Household Finance: Revitalizing the business that got it started," Business Week, September 25, 1978, pp.124-125.

Janis, I.L. Victims of Groupthink. Boston: Houghton-Mifflin, 1972.

Janis, I.L. and L. Mann. Decision-Making: A Psychological Analysis of Conflict, Choice and Commitment. New York: The Free Press, 1977.

Langer, E.J. "The Illusion of Control." Journal of Personality and Social Psychology 32 (1975):311-328.

Nees, Danielle B. "The Divestment Decision Process in Large and Medium-Sized Diversified Companies: A Descriptive Model Based on Clinical Studies." International Studies of Management and Organization 8 (Winter 1978-79):67-95.

Quinn, J.B. Strategies for Change: Logical Incrementalism. Homewood, Illinois: Irwin, 1980.

"Ralston Purina: Turnabout at the top of Checkerboard Square," Business Week, September 10, 1979, pp.112-116.

Schwenk, C.R. "Effects of Inquiry Methods and Ambiguity Tolerance on Prediction Performance." Decision Sciences 13 (1982b):207-221.

Schwenk, C.R. "Management Illusions and Biases: Their Impact on Strategic Decisions." Long Range Planning, (forthcoming).

Schwenk, C.R. "Why Sacrifice Rigor for Relevance? A Proposal for Combining Laboratory and Field Research in Strategic Management." Strategic Management Journal 3 (1982b):213-225.

Schwenk, C.R. and R.A. Cosier. "Effects of the expert, devil's advocate, and dialectical inquiry methods on prediction performance." Organizational Behavior and Human Performance 26 (1980):409-423.

Staw, B.M. "The escalation of commitment to a course of action." Academy of Management Review 6 (1981):577-587.

Steinbruner, J.D. The Cybernetic Theory of Decision. Princeton, N.J.: Princeton University Press, 1974.

Taylor, R.N. "Psychological determinants of bounded rationality: Implications for decision-making." Decision Sciences 6 (1975):409-429.

"Technology Transfer's Master," Business Week, October 10, 1977, pp.120-124.

Tversky, A. and D. Kahneman. "Judgement under uncertainty: Heuristics and Biases." Science 185 (1974):1124-1131.

Uyterhoeven, H. General Cinema Corporation, Intercollegiate Case Clearing House, Number 9-377-084, 1976.